



Patent
Attorney's Docket No. 1005950-000832

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
Robert M. CARLSON et al.) Group Art Unit: 1722
Application No.: 10/621,718) Examiner: Robert M. Kunemund
Filed: July 16, 2003) Confirmation No.: 1570
For: DIAMONDOID-BASED)
COMPONENTS IN NANOSCALE)
CONSTRUCTION)
)

RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In complete response to the Official Action issued on June 30, 2006
applicants offer the following remarks.

In the Office Action, claims 1 and 15 are rejected under 35 U.S.C. §103 as
being unpatentable over Spencer et al (U.S. Patent No. 6,531,107) taken in view of
Merkle (*Nanotechnology*, Vol. 11). As well, the remaining claims 2-14 and 16-20 are
also rejected under 35 U.S.C. §103 as being unpatentable over Spencer et al taken
in view of Merkle. The Examiner's rejections of the claims of record are respectfully
traversed by applicants for the following reasons.

The Spencer et al patent relates to the use of subunits called "synthons" for
use in the design and manufacture of molecular nanostructures, machines and
devices. The synthon is described as comprising polyhedra units and other species
which exhibit rigid structural frameworks. Among the specific, presently available
molecular units that can be used and qualify for construction on a nanoscale are
borane and carborane clusters. A great deal of the discussion in Spencer et al is